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**Amendments to the CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims**

Claim 1 (currently amended)

Claims 2-6 (previously withdrawn)

Claim 7 (currently amended)

Claims 8-11 (previously withdrawn)

Claim 12 (currently amended)

Claim 13 (previously withdrawn)

Claim 14 (currently amended)

Claim 15 (previously withdrawn)

Claim 16 (currently amended)

Claims 17-24 (previously withdrawn)

Claims 25 - 31

Replace Claim 1 as follows:

Claim 1. A system for using outside ventilation air to maintain indoor comfort and air quality in a building, comprising a means for air delivery, a means for dampening between indoor and outdoor air sources, a means for sensing temperature, a means for interpreting sensed temperature to provide a suggestion of how to control said system, and a means for accepting control parameters and using said parameters to control said system, wherein:

said air delivery means comprises an air mover capable of variable speeds to deliver air within said building to provide ventilation cooling;

said damper means includes at least two positions wherein a first of said positions causes said air delivery means to recirculate indoor air, and a second of said positions causes said air delivery means to supply a quantity of outdoor air into said building and to release a substantially equal quantity of indoor air to the outdoors;

said sensor means includes an indoor air temperature sensor and an outdoor air temperature sensor;

said control means includes a single user interface and a controller;

said at least one user interface and said controller are connected by a communication means that allows said controller to receive data from said sensor means;

said user interface includes buttons for establishing control settings and allows the user to establish preferred minimum and maximum indoor temperature settings;

said controller includes a microprocessor programmed with algorithms for predicting outdoor and indoor temperatures from temperature data obtained from said sensor means and from said minimum and maximum temperature settings;

said controller conveys said predictions to said user interface where they are graphically displayed and from which a user of said system can select settings that maintain a desired comfort level and minimize needs for vapor compression-based air conditioning of the building interior.;

said algorithms calculate a ventilation limit temperature that is greater than or equal to said minimum temperature setting and that increases with decreasing building cooling requirements to prevent over-cooling, and calculate a preferred speed for said air mover; and

said control means initiates said ventilation cooling operation by activating said air delivery means and by changing the position of said damper means to said second position when the temperature sensed by said indoor sensor exceeds the temperature sensed by said outdoor sensor by a predetermined magnitude, and terminates said ventilation cooling operation when the temperature sensed by said indoor sensor falls below said ventilation limit temperature.

TO REPLACE

Claim 1. A system for using outside ventilation air to maintain indoor comfort and air quality in a building, comprising an air delivery means a means for air delivery, damper means a means for dampering between indoor and outdoor air sources, sensor means a means for sensing temperature, a means for interpreting sensed temperature to provide a suggestion of how to control said system, and control means a means for accepting control parameters and using said parameters to control said system, wherein:

said air delivery means comprises an air mover capable of variable speeds to deliver supplies outside air within said building to a building interior regulated by said control means for the purpose of providing to provide ventilation cooling;

said damper means includes at least two positions wherein directs airflow from said air delivery means using a first and second position, wherein said damper first

~~position, a first of said positons~~ causes said air delivery means to recirculate indoor air,  
and ~~said damper second position~~ a second of said positions causes said air delivery  
means to supply ~~outside air to indoor spaces and to release a similar volume of indoor~~  
~~air to outdoors~~ a quantity of outdoor air into said building and to release a substantially  
equal quantity of indoor air to the outdoors;

said sensor means includes an indoor air temperature sensor and an outdoor air  
temperature sensor, ~~both for measuring air temperature;~~

said control means includes a single user interface and a controller;

said at least one user interface and said controller are connected by a  
communication means that allows said controller to receive data from said sensor  
means;

said user interface includes buttons for establishing control settings and ~~said~~  
~~user interface~~ allows the user to establish preferred minimum and maximum indoor  
temperature settings;

said controller includes a microprocessor programmed with algorithms for  
predicting outdoor and indoor temperatures from temperature data obtained from said  
~~indoor and outdoor temperature sensors~~ sensor means and from said minimum and  
maximum temperature settings;

said controller ~~conveying~~ conveys said predictions to said user interface where  
they are graphically displayed and from which a user of said system can select settings  
that maintain a desired comfort level and minimize needs for ~~cooling of the building~~  
~~interior using vapor compression-based air conditioning~~ of the building interior;

said algorithms calculate a ventilation limit temperature ~~which~~ that is greater than or equal to said minimum temperature setting and ~~which~~ that increases with decreasing building cooling requirements to prevent over-cooling, and calculate a preferred speed for said air mover; and

said control means initiates said ventilation cooling operation by activating said air delivery means and by changing the position of said damper means to said second position when the temperature sensed by said indoor sensor exceeds the temperature sensed by said outdoor sensor by a predetermined magnitude, and terminates said ventilation cooling operation when the temperature sensed by said indoor sensor falls below said ventilation limit temperature;

Claim 7 (currently amended) . The system of claim 1, wherein said air delivery means and said damper means can be operated at the command of the user to either re-circulate indoor air or supply outside air [;] .

Claim 12 (currently amended) The system of claim 1, wherein said air delivery means includes an air heating means selected from a furnace or heating coil for supplying warm air [;] .

Claim 14 (currently amended) The system of claim 1, wherein said control means in cooperation with [,] said air delivery means [,] and said damper means cause a specified volume of outside air to be delivered to a building interior to maintain indoor air quality [;] .

Claim 16 (currently amended) The system of claim 1, further comprising a compressor-based air conditioner condensing unit and evaporator coil [;] .

Add Claims 25 – 31.

Claim 25 (new) A process for using outside ventilation air to help maintain comfort and air quality in an indoor space, comprising the steps of :

- (a) measuring the temperature of the air in said indoor space and the temperature of the outside air;
- (b) inputting, through a user interface, settings for upper and lower indoor temperature limits and a desired interior temperature;
- (c) storing said measurements and settings in electronic memory;
- (d) using a microprocessor-based controller and associated algorithms in conjunction with said measurements and settings to control a damper means and an air delivery means; and
- (e) controlling said damper means and said air delivery means based on said algorithms to:
  - 1) deliver outdoor air to said indoor space, at selected intervals when said outdoor air is cooler than said indoor air, to maximize the probability of maintaining indoor temperature between said upper and lower temperature settings and to minimize the need for vapor compression cooling; and
  - 2) recirculate indoor air to said indoor space to create air movement, to filter said indoor air, or to deliver vapor compression cooling.

Claim 26 (new) The process of claim 25, wherein controlling includes manual operation at the command of the user to either recirculate indoor air or supply outside air to said indoor space.

Claim 27 (new) The process of claim 25, wherein controlling includes heating the circulated air with a means selected from a furnace or heating coil.

Claim 28 (new) The process of claim 25, wherein said controlling also includes insuring that a specified volume of outside air is delivered to said indoor space to maintain indoor air quality.

Claim 29 (new) The process of claim 25, wherein said controlling includes operating a vapor compression cooling system to maintain said indoor temperature at said upper limit temperature setting.

Claim 30 (new) The process of claim 25, wherein said controlling includes operating an evaporative cooling means to maintain said indoor temperature at said upper limit temperature setting..

Claim 31 (new) The process of claim 25, wherein said controlling includes determining whether to use vapor compression, evaporative, or outdoor air means, or a combination thereof, to cool said indoor space.